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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/785,084	02/25/2004	Ichiro Tanaka	Q79955	8542
23373	7590	01/31/2006	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			SAMPLE, DAVID R	
			ART UNIT	PAPER NUMBER
			1755	

DATE MAILED: 01/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/785,084	TANAKA ET AL.	
	<b>Examiner</b> David Sample	<b>Art Unit</b> 1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 15 December 2005.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-7 and 10-13 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) 11-13 is/are allowed.  
 6) Claim(s) 1-7 and 10 is/are rejected.  
 7) Claim(s) 1 and 5 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
     Paper No(s)/Mail Date \_\_\_\_\_.

4) Interview Summary (PTO-413)  
     Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

Any rejections and/or objections, made in the previous Office Action, and not repeated below, are hereby withdrawn.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Objections***

Claims 1 and 5 are objected to because of the following informalities:

In claim 1, line 1, “the zirconia sintered body” lacks antecedent basis. “The” should be “A”.

In claim 1 on the first line of page 3 of the response, “CeO” should be “CeO<sub>2</sub>” (see original claim 9).

In claim 5, line 2, “pm” should be -- μm --.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

Claims 1-7, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsukuma et al. (US 4,744,041).

Tsukama et al. discloses stabilized zirconia ceramics which have the tetragonal crystal structure. See col's 13-14, Table 4, the fourth and fifth examples; col. 15-16, Table 6, first example; col's 17-18, Table 9, fifth through eight examples. The ceramics contains 2 mole percent Y<sub>2</sub>O<sub>3</sub> and have an average grain size of 0.1 and 0.2 μm. Id. A ceramic containing 2

mole percent Y<sub>2</sub>O<sub>3</sub> and 98 mol% ZrO<sub>2</sub> converts to a ceramic containing 3.6 wt% Y<sub>2</sub>O<sub>3</sub> and 96.4 wt% ZrO<sub>2</sub>.

Tsukama et al. does not disclose the FWHM of the ceramic products. However, the breadth of x-ray diffraction peaks is mainly determined by the grain size of the ceramic that is being measured. A broader peak results from smaller particle/grain size. See, e.g., page 100 of Cullity. The ceramics of Tsukama et al. contain an average particle size that is identical to grain size of claim 5. For these reasons, the FWHM properties of claims 1-3 are presumed to be inherent to the ceramic of the reference. See MPEP 2112 for a discussion of inherency.

As to claim 4, the reference discloses that the ceramic is entirely tetragonal zirconia. See See col. 6, lines 51-64.

Claims 6 and 7 recite a density using one significant figure. The reference discloses materials having a density of 5.50 g/cm<sup>3</sup>, which is 6 g/cm<sup>3</sup> when considering a single significant figure. See col's 17-18, Table 9, sixth through eight examples.

#### *Response to Arguments*

Applicant's arguments with respect to claims 1-7 and 10 have been considered but are moot in view of the new ground(s) of rejection.

#### *Allowable Subject Matter*

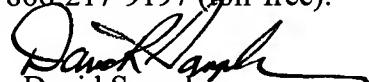
Claims 11-13 are allowed.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Sample whose telephone number is (571)272-1376. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (572)272-1233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David Sample  
Primary Examiner  
Art Unit 1755